

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 November 2003 (20.11.2003)

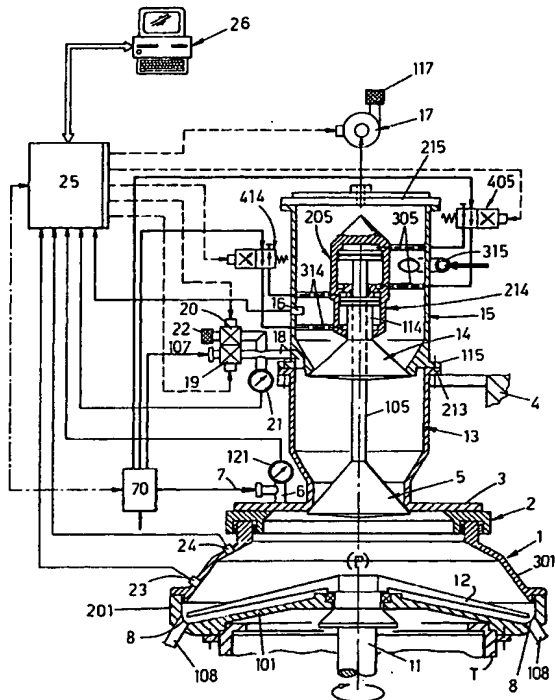
PCT

(10) International Publication Number
WO 03/095310 A1

- (51) International Patent Classification⁷: B65B 37/02, 37/14
- (21) International Application Number: PCT/EP03/04820
- (22) International Filing Date: 8 May 2003 (08.05.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: BO2002A000283 13 Nov 04 13 May 2002 (13.05.2002) IT
- (71) Applicant (for all designated States except US): B.L. MACCHINE AUTOMATICHE S.P.A. [IT/IT]; Via Ronchi Inferiore, 30/B, I-40061 Minerbio (IT).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): FACCHINI, Libero [IT/IT]; Via Ponte Buco, 22, I-40068 San Lazzaro di Savena (IT).
- (74) Agents: PORSIA, Attilio et al.; Succ. Ing. Fischetti & Weber, Via Caffaro, 3/2, I-16124 Genova (IT).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: PROCESS AND APPARATUS FOR FEEDING POWDERED, GRANULAR OR HERB-BASED PRODUCTS



(57) Abstract: A product hopper (1) is designed so that it can be sealed with respect to the means (13) for the cyclical feed of the product and with respect to the external environment, and is designed so that it can be pressurized with compressed gas, in such a way that the said product is fluidized by the compressed gas and is pushed by the latter in a continuous and uniform way towards the dosing stations (D), which are connected to the periphery of the said hopper and are designed to promote the flow of the product towards them. A description is also given of the means which enable the hopper to operate continuously even when batches of product are introduced into it in a cyclic way.

WO 03/095310 A1

WO 03/095310 A1



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/04820

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B65B37/02 B65B37/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B65B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 48757 A (DEBOY LEE SIMON ; SMITH S SNACKFOOD COMPANY LIM (AU)) 30 September 1999 (1999-09-30) abstract	1-7,9
A	page 3, line 2 - page 4, line 31 page 5, line 20 - line 22 page 11, line 21 - line 23	10
X	GB 652 662 A (CECIL EDWARD EVERY; SMITH & CO AS F L) 25 April 1951 (1951-04-25) page 4, line 27 - line 36	1-4,6,9
A	US 3 557 847 A (HEBEL CARL G ET AL) 26 January 1971 (1971-01-26) the whole document	1,9
	-/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

22 September 2003

Date of mailing of the international search report

26/09/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5618 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Vigilante, M

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/04820

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 640 322 A (BALLESTER EDWIN) 3 February 1987 (1987-02-03) figures 3,12-14 -----	1-22

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/04820

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9948757	A	30-09-1999	AU 742490 B2	03-01-2002
			AU 3127599 A	18-10-1999
			WO 9948757 A1	30-09-1999
			BR 9909099 A	05-12-2000
			CA 2325003 A1	30-09-1999
			EP 1077873 A1	28-02-2001
GB 652662	A	25-04-1951	NONE	
US 3557847	A	26-01-1971	NONE	
US 4640322	A	03-02-1987	CA 1265485 A1	06-02-1990
			DE 3625034 A1	02-07-1987
			GB 2184709 A ,B	01-07-1987
			IT 1221773 B	12-07-1990
			JP 1937110 C	09-06-1995
			JP 6062121 B	17-08-1994
			JP 62158628 A	14-07-1987